Avenview

AV Connectivity, Distribution And Beyond...

VIDEO WALLS VIDEO PROCESSORS
VIDEO MATRIX SWITCHES
EXTENDERS SPLITTERS WIRELESS
CABLES & ACCESSORIES

HDMI Matrix Switcher with 2x2 Videowall function & Audio

Touchboards

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HDMI | AUDIO | IR | WUXGA 1920x1200 | HDMI HDCP | HD ready 1080p | RoHS Compliant FC CE

Model #: HDM-SWITCHPRO-VW4

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Product Application & Market Sectors

Coroprate

House Of Worship

Military

Residential

Education

Industrial

Medical

Aviation

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SECTION 1: GETTING STARTED

1.1 IMPORTANT SAFEGUARDS

Please read all of these instructions carefully before you use the Fiber Optic cable. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
- Repair or attempted repair by anyone not authorized by us.
- Any damage of the product due to shipment.
- Removal or installation of the product.
- Causes external to the product, such as electric power fluctuation or failure.
- Use of supplies or parts not meeting our specifications.
- Normal wear and tear.
- Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 SAFETY INSTRUCTIONS

The HDM-SWITCHPRO-VW4, HDMI Matrix Switcher with Videowall and audio has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the HDM-SWITCHPRO-VW4 should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

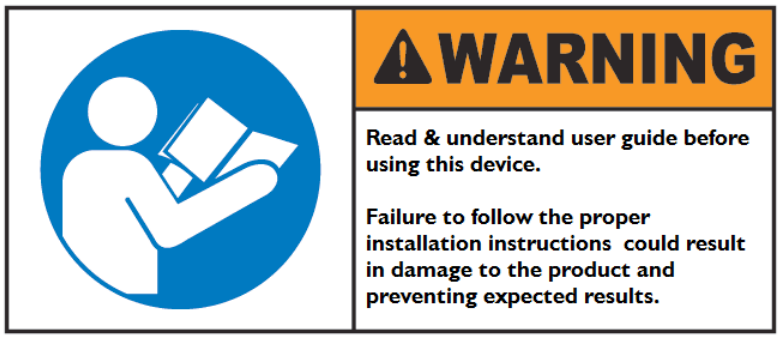
- ⚠ Do not dismantle the housing or modify the module.
- ⚠ Dismantling the housing or modifying the module may result in electrical shock or burn.
- ⚠ Refer all servicing to qualified service personnel.
- ⚠ Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- ⚠ Keep the module away from liquids.
- ⚠ Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- ⚠ Have the module checked by a qualified service engineer before using it again.
- ⚠ Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

1.3 REGULATORY NOTICES FEDERAL COMMUNICATIONS COMMISSION (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

Warning symbols	Description
	ONLY USE THE PROVIDED POWER CABLE OR POWER ADAPTER SUPPLIED. DO NOT TAMPER WITH THE ELECTRICAL PARTS. THIS MAY RESULT IN ELECTRICAL SHOCK OR BURN.
	DO NOT TAMPER WITH THE UNIT. DOING SO WILL VOID THE WARRANTY AND CONTINUED USE OF THE PRODUCT.
	THE VIDEO BOARDS ARE VERY SENSITIVE TO STATIC. PLEASE ENSURE IF RACK MOUNTED OR INSTALLED ON A SURFACE, IT SHOULD BE IN A GROUNDED ENVIROMENT.


WARNING
Read & understand user guide before using this device.
Failure to follow the proper installation instructions could result in damage to the product and preventing expected results.

2. INTRODUCTION

This unique powerful processor was developed for the growing demand in the digital market which has made 2x2 Videowall advertising become an industry standard in marketing.

This small form factor HDMI device can perform many functions such as;

4x4 Matrix switcher – This device can input 4 HDMI digital sources and then distribute the video and audio signal to any 4 HDMI HD Monitors. Supported video timings up to 1080p@60Hz Full HD and WUXGA Wide 1920x1200 audio formats up to 7.1CH LPCM AT 192Hz. This device can be configured using the IR Remote, Telnet, Rs232 or Front Panel buttons to set the desired 1-4 output sources. Bonus feature of this device, while in Matrix mode the switching is seamless between the sources NO Delay

Multi Input Splitter – This device can input 4 HDMI digital sources and then duplicate one source at once to the connected 4 HDMI HD Monitors. This device can be configured using the IR Remote, Telnet, Rs232 or Front Panel buttons to set the desired output source.

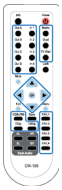
Dual-Viewer – This device can input 4 HDMI digital sources and then combine, (4) four video signals onto two HD Monitors at Full HD 1080p. This device can be configured using the IR Remote, Telnet, Rs232 or Front Panel buttons to set the desired PAP (Picture Aside Picture).

Videowall 2x2 – This device can input 4 HDMI digital sources and scale (1) one Input across the (4) four HD monitors in a 2x2 configuration at Full HD 1080p. This device can be configured using the IR Remote, Telnet, Rs232 or Front Panel buttons to set the desired video across the (4) four HD Monitors with Bezel Correction to align the image seamlessly.

- Input resolution settings from PC -VGA, XGA (1024 x 768), SXGA (1280 x 1024), UXGA (1600 x 1200), WUXGA (1920 x 1200)
- Input resolution settings from Digital Player- 480p up to Full HD 1080p (1920 x 1080);
- Output Resolutions from 480p to 1080p Deep Color 8/10/12 bit source
- Audio Supports LPCM 2CH, 6CH, 8CH/AC3/DTS/Dolby Digital Plus/Dolby TruHD & DTS-HD
- Fine tuning and adjustments of contrast, brightness, Saturation and hue;
- Preset up to 4 favorite layout options;
- Auto EDID detect from the source;
- Bezel Correction support for 2x2 Videowall Mode;
- USB for Service Mode and Firmware upgrade;
- Connection by IR Remote, Telnet or Rs232 for user setup and configuration;
- HDMI, HDCP and DVI Compliant;
- Also supports Web-GUI control (use the unit's IP address in IE or other browsers and this will allowthe user to control the unit remotely) User can get IP from OSD Menu → Ethernet or use RS232 command "Get IP"
- Factory Reset;

2.1 PACKAGE CONTENTS

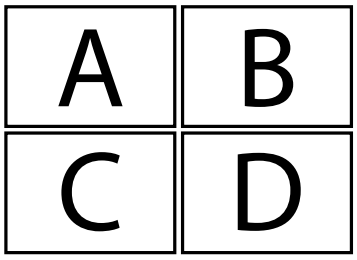
Before you start the installation of the converter, please check the package contents.

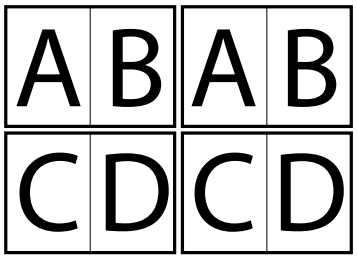
1	HDM-SWITCHPRO-VW4	X 1	
2	Power Supply (12V 3A)	X 1	
3	IR Remote	X 1	
4	CD (Optional) Download Available	X 1	
5	User's Manual	X 1	

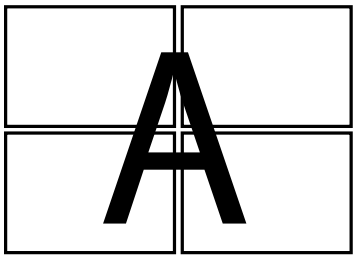
2.2. BEFORE INSTALLATION

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the video cable. It can cause malfunction.

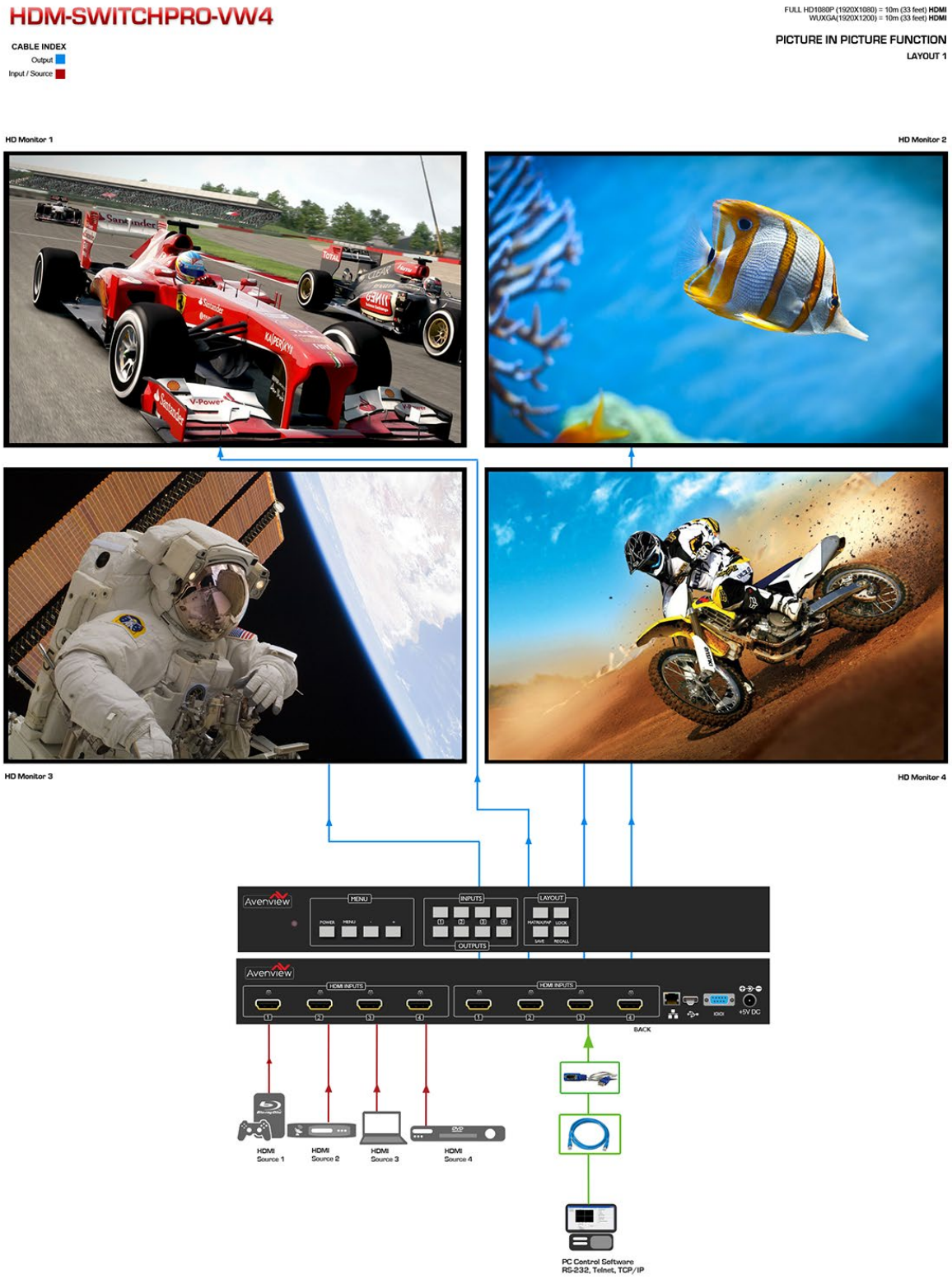
Device Layout Functions







2.3 APPLICATION DIAGRAM



HDM-SWITCHPRO-VW4

CABLE INDEX
Output
Input / Source

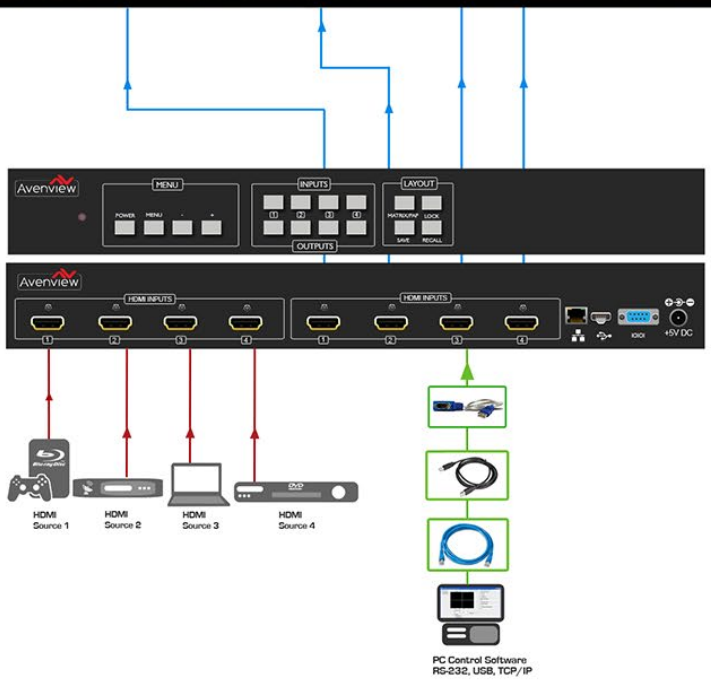
FULL HD1080P (1920X1080) = 10m (33 feet) HDMI
WUXGA(1920X1200) = 10m (33 feet) HDMI

2x2 VIDEOWALL FUNCTION

LAYOUT 2

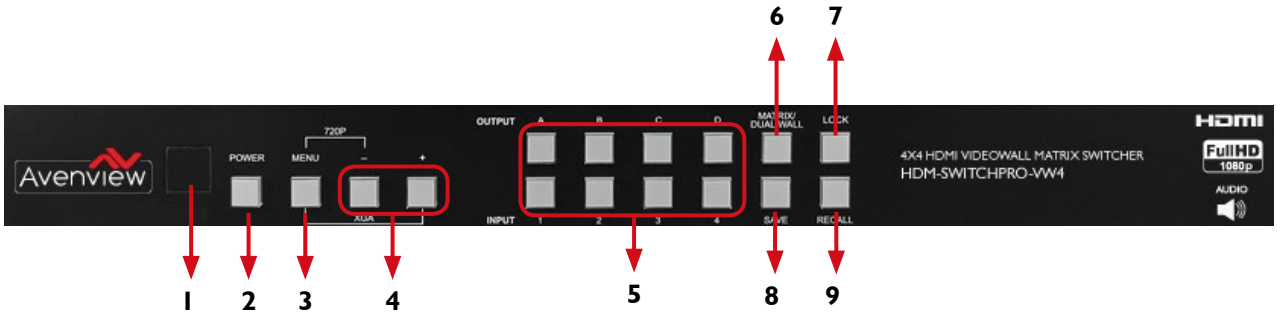
HD Monitor 1 HD Monitor 2

HD Monitor 3 HD Monitor 4



3. PANEL DESCRIPTION

3.1 Control Panel Front



1. **IR Window:** Receives IR signals from the device remote control (Included in package)	2. **Power Button:** Toggle ON/OFF First Press Power On Second Press Standby Mode. **Note : Quick Factory Reset** HOLD power button then connect power supply to the unit.
3. **Menu Button :** Shows the OSD Menu on the screen **Menu with "-" button :** switches the output timing to 720@60Hz **Menu with "+" button :** switches the output timing to XGA (1024x768@60Hz)	4. **-/+ Buttons :** To scroll down and up in the OSD Menu to confirm the selection **"Press Menu Button"**
5. **Input IN 1- IN 4 /Output OUT1- OUT4 :** Refer to Section below **NO.5**	6. **Matrix/Dual/2x2 Button:** Toggle between the different modes
7. **LOCK:** Press once to lock the keypad and the remote control. To deactivate lock function press for 3 sec.	8. **SAVE:** To save the user customized input and output settings
9. **RECALL:** During the operation of Matrix/Dual/2x2, press "RECALL" and the input channel 1-4 LED will illuminate at once , select input channel 1/2/3 or 4 to recall the customized screen settings and this will correspond to buttons on the remote control FAV-1 to FAV-4.	

NO.5: Input IN 1- IN 4 /Output OUT1- OUT4

MATRIX MODE

Press Matrix /Dual/2x2 button to switch to Matrix mode and LED will illuminate steady.
To choose OUTPUT OUT1-OUT4 press the corresponding Input IN 1- IN4
Example: 1st Press OUT 1 2nd Press IN 1 the HD monitor attached to OUT 1 will display IN 1 image.

DUAL MODE

Press Matrix /Dual/2x2 button to switch to Dual mode and LED will illuminate steady.
Choose the output OUT1/OUT2 and then the Input IN1/IN2
Example: Press OUT1 then press IN1- result OUT1 will display IN1 image on the left side
Press OUT2 then press IN2 – result OUT1 will display IN2 image on the right side
The (2) two HD monitors connected to OUT1/2 will now show two images on each monitor in a PAP (Picture aside Picture) format.

Dual A group are output OUT1 and OUT2, Dual B group are output OUT3 and OUT4.
Each group will output the same image simultaneously.

AUDIO

Press button OUT1 or OUT2 for 3 seconds, to switch DUAL A channel's audio between outputs OUT1 or OUT2
Press button OUT3 or OUT4 for 3 seconds, to switch DUAL B channel's audio between outputs OUT3 or OUT4.

2x2 VIDEOWALL MODE

Press Matrix /Dual/2x2 button to switch to 2x2 mode and LED will illuminate steady.
Press input IN1-IN4 to select a source to display across all four Monitors in a 2x2 Videowall configuration. The audio will be on output OUT1 only.

NO.8: SAVE

CUSTOMIZED INPUT AND OUTPUT SETTINGS

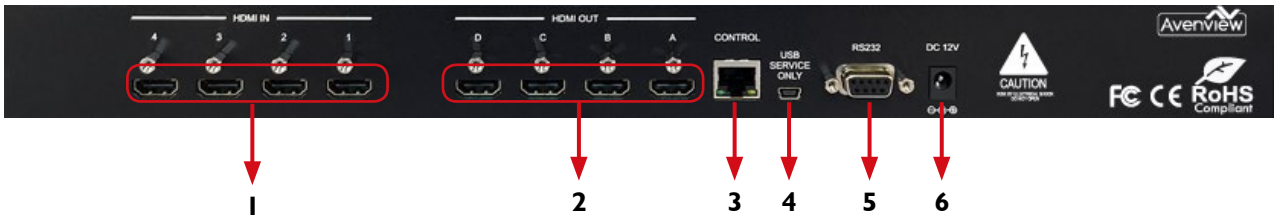
Press Matrix/Dual/2x2 button to select the function required.
Press each output channel OUT1-OUT4 and then press the corresponding input channel IN1-IN 4.

SAVE INPUT

Press "SAVE", the input 1-4 LEDs will illuminate, all at the same time.
Proceed to select the input 1/2/3 or 4 to save to the systems memory.

Example: Select Matrix mode, press output OUT1 then press input IN4, then press "SAVE".
This will correspond to remote control FAV-1-FAV 4.

3.2 Input Panel Rear



1. **HDMI IN 1-4:** Connect up to 4 HDMI deceives to the INPUT ports 1-4 (Blu-ray or PC)	2. **HDMI OUT 1-4:** Connect up to 4 HDMI HD Monitor/Displays to view inputs connected.
3. **Ethernet Control:** Connect RJ45 jack to an active network for Telnet control Please download codes from WEBSITE	4. **USB Service Only:** This port is reserved for factory use only.
5. **RS-232:** D-Sub 9-pin port for sending and controlling the unit by PC/Notebook via RS232 cable.	6. **DC 12V:** Plug the 12V DC power supply into the unit supplied to an AC 110v Outlet.

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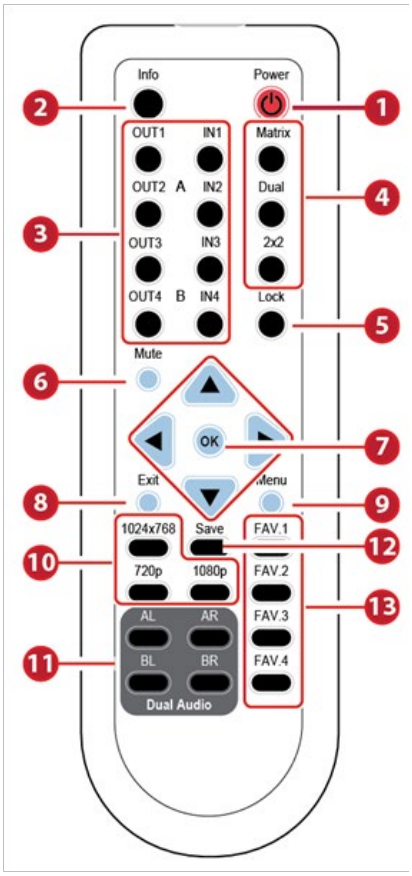
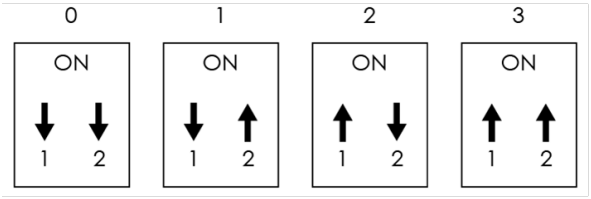
4. IR REMOTE CONTROL



1. **POWER BUTTON:** 1st Press Power on the device / 2nd Press - Standby mode.
2. **INFO BUTTON:** To show device firmware version
3. **OUT1~OUT4 and IN 1~ IN 4:** 1st Press output 1~4 2nd Press input1~4 to select display input.
   Example: Press OUT1 then Press IN1, OUT1 will display Input's1 image.
4. **MATRIX/DUAL/2x2:** Toggle between Matrix mode, Dual mode and 2x2 mode.
5. **LOCK BUTTON:** 1st Press to lock the keypad and remote control, 2nd Press for 3 second release the lock function.
6. **MUTE BUTTON:** To mute the audio from the HDMI output ports.
7. **NAVIGATION BUTTONS:**-▲/▼/←/→/OK to scroll through the OSD MENU. OK to Enter or confirm the settings.
8. **EXIT BUTTON:** To exit the OSD menu or OSD settings.
9. **MENU BUTTON:** To access the OSD menu.
10. **HOTKEYS BUTTONS:** 1024x768/720p/1080p to quickly switch between resolutions.
11. **HOT KEYS BUTTONS AL/AR/BL/BR:** In Dual mode, press these buttons to switch the audio channel Left or Right side for Dual A and Dual B group.
12. **SAVE BUTTON:** To save the user customized input and output corresponding settings.

REMOTE CONTROL DIP SWITCH

Open the IR Remote control back cover to adjust dip-switch UP- ON/ DOWN - OFF to match IR address settings in the OSD (On Screen Display) menu. Factory default is on 0.



4.1 Hardware Setup

To setup Avenview HDM-SWITCHPRO-VW4 follow these steps below:

1. Mount or fix the HDM-SWITCHPRO-VW4 on a secure shelf, AV rack or steady surface;
2. Ensure the power is off on the HDM-SWITCHPRO-VW4, all source devices and displays that will be connected;
3. Connect your (4) four HDMII cables to the (4) four HDMI sources such as (Blu-ray Player, Laptop or Set-Top-Box or Gaming device);
4. Connect your (4) four HDMI cables to the (4) four HD Displays, LCD or PC Monitors that is receiving the video signals.
5. Power on all devices.
6. Connect your computer to HDM-SWITCHPRO-VW4 via RS232, RS-232 to USB or Ethernet cable and then proceed to section 4.2 Control Software.

4.2 Control Software

The HDM-SWITCHPRO-VW4 can be controlled via Windows based Laptop/PC by installing the software HDM-SWITCHPRO-VW4-1.5.Control software can be downloaded from Avenview website under the product part number HDM-SWITCHPRO-VW4>download/software section

GENERAL INSTRUCTIONS

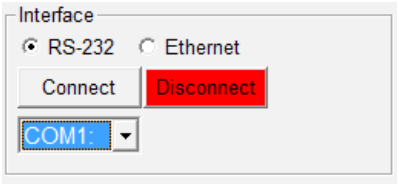
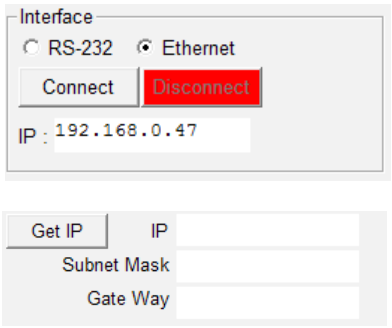
1. Before you begin the installation of the control software ensure the HDM-SWITCHPRO-VW4 is connected to AC power and your PC via RS-232, USB to RS-232 or Ethernet Patch Cord PC Requirements-Windows® XP/Windows Vista®/Windows® 7/Windows® 8
2. Ensure the Laptop/PC is plugged in to AC power during the installation process. It is not recommended to use only battery power during the installation. Do not remove power at any time during the installation process as this could lead to incomplete results.

4.3 Software Setup Guide

Please ensure the communication cables (RS-232, RS-232 to USB, Ethernet) are properly seated and the drivers for the RS-232 to USB are installed before and confirmed communication in the Device Manager before proceeding.

RS-232 SETTINGS	Baud Rate: 115200bps Data Bit: 8 bits Parity: None Flow Control: None Stop Bit: 1

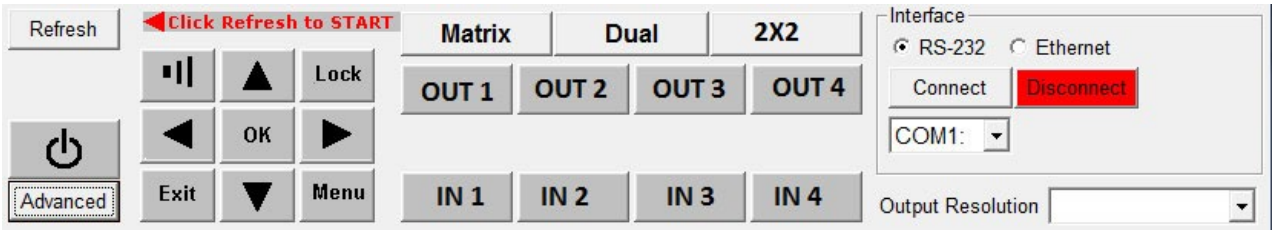
To connect to the HDM-SWITCHPRO-VW4 please choose any of the (2) two convenient methods by selecting the connection tab and confirming the method.

TYPE OF CONNECTION	PORT CONFIGURATION
	**- RS232** 1. Choose the correct COM port (verify from PC device manager). 2. Press Connect. Connection Successful – The connect button will be green. If not, a popup window -Error message "COM # Fail!"
	**- TCP/IP** 1. Choose Ethernet (verify from Network Support an assigned IP address or Press GET IP from control software). 2. Press Connect. Connection Successful - The connect button will be green. If not, a popup window -Error message "Could not find Server!"

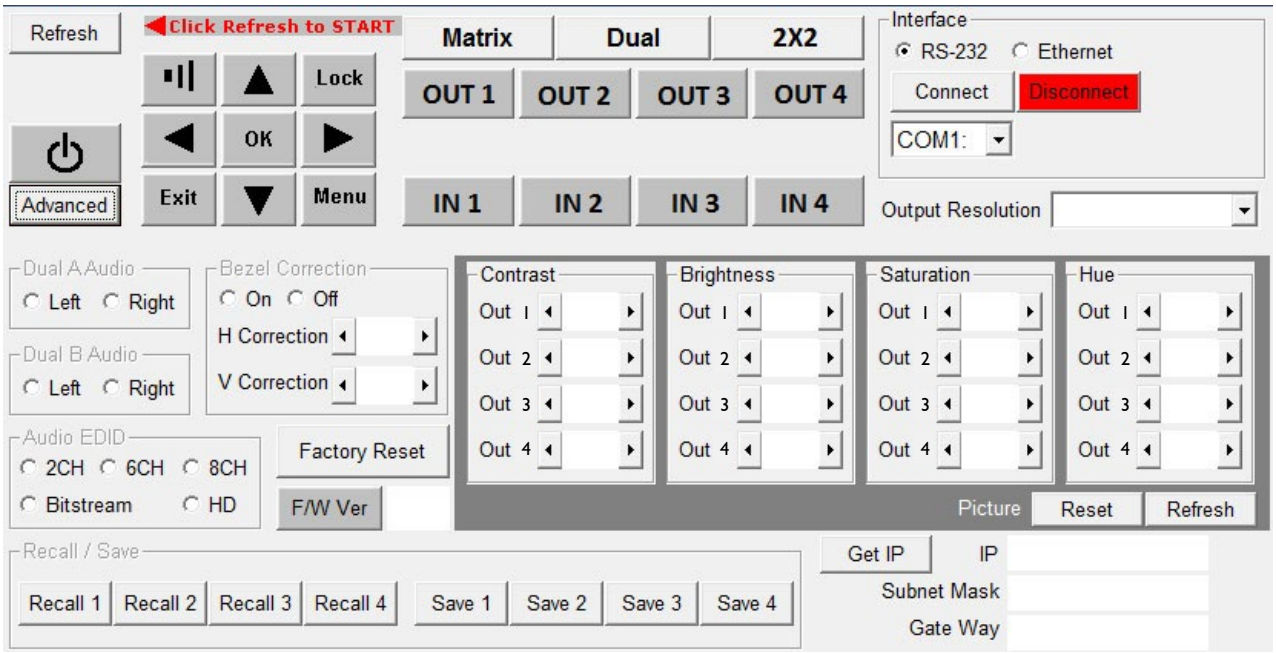
5. GUI (SOFTWARE INTERFACE)

This unit can be controlled via PC with Control Software or Hyper Terminal to configure the settings. See the additional documentation for control codes for download via Website.

5.1 Simple Control Panel



5.2 Advance Control Panel



6. SPECIFICATIONS

Item	Description	
UNITS	HDM-SWITCHPRO-VW4	
UNIT DESCRIPTION	4x4 Matrix Switch with 2x2 Videowall Function with Audio	
HDCP COMPLIANCE	Yes	
VIDEO BANDWIDTH	225 MHz (6.75Gbps)	
SUPPORTED RESOLUTIONS	Refer to section 7 on the User Guide	
AUDIO SUPPORT	LPCM 2CH, 6CH, 8CH/AC3/DTS/Dolby Digital Plus/Dolby TruHD & DTS-HD	
INPUT	4 x HDMI19 Pin Female type connector	1 x RJ45/RS-232 1xMini USB service only
OUTPUT	4 x HDMI 19 Pin Female type connector	
USB CONNECTOR	Type A Mini USB	
RJ45 CONNECTOR	WE/SS 8P8C with 2 LED indicators	
SWITCHING SPEED	±8 kV (air-gap discharge) ±4 kV (contact discharge)	
UNIT WEIGHT	4.85 lbs	
DIMENSIONS (L X W X H)	17.2" x 9.8" x 1.8"	
POWER SUPPLY	12V/3A DC (US/EU standards, CE/FCC/UL certified)	
POWER CONSUMPTION	TBA	

ENVIRONMENTAL

OPERATING TEMPERATURE	32° ~ 104°F (0° to 40°C)
STORAGE TEMPERATURE	-4° ~ 140°F (-20° ~ 60°C)
RELATIVE HUMIDITY	20~90% RH (no condensation)

7. INPUT/OUTPUT SUPPORT TIMING

7.1 Input Support Resolution

INPUT SUPPORT RESOLUTION
480i@59
480p@60
576i@50
576p@50
720p@25,30,50,60,
1080i@50,60
1080p@24,25,30,50,60
640x480@60,72,75,85
720x400@70
800x600@56,60,72,75,85
1024x768@60,70,75,85
1152x864@70,75
1280x720@60cvt
1280x768@60RB,60,75
1280x800@60RB,60,75
1280x1024@60,60cvt,75
1360x768@60
1366x768@60RB,60
1400x1050@60RB,60
1440x900@60RB,60,75
1600x900@60RB
1600x1200@60
1680x1050@60RB,60
1920x1200@60RB

7.2 Output Support Resolution

OUTPUT SUPPORT TIMING RESOLUTION	
480p60	1024x768@60
576p50	1280x800@60
720p50	1280x1024@60
720p60	1366x768@60
1080i50 (Matrix Mode Only)	1440x900@60
1080i60 (Matrix Mode Only)	1600x900@60RB
1080p24	1600x1200@60
1080p50	1680x1050@60
1080p60	1920x1200@60RB

Avenview Warranty Certificate

AVENVIEW CORP. ("Avenview") warrants Avenview-branded product(s) contained in the original packaging against defects in materials and workmanship when used normally in accordance with Avenview's enclosed manual guidelines for a period of THREE (3) YEARS from the date of original retail purchase - Warranty Period. Avenview's published guidelines include but are not limited to information contained in technical specifications, user manuals and service communications.

LABOR: During the Warranty Period of THREE (3) YEARS, Avenview will repair or replace the product(s) at no cost using new or used parts equivalent to novel performance and reliability if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Labor applicable to product(s) after Warranty Period. For labor costs, please contact support@avenview.com.

PARTS: During the Warranty Period of of THREE (3) YEARS, Avenview will supply new or rebuilt replacements in exchange for defective parts of the product(s) at no cost if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Parts applicable to product(s) after Warranty Period. For part(s) costs, please contact support@avenview.com.

To obtain Warranty: (a) proof of purchase in the form of a bill of sale or receipted invoice reflecting that the registered product(s) is within warranty period must be presented to obtain warranty service; (b) product(s) must be registered at time of purchase. Failure to do so will result in applicable parts and labor charges. Returning product(s) must be shipped in Avenview's original packaging or in packaging pertaining equal degree of protection to Avenview's. Both Avenview and purchaser are responsible for freight charges and brokerages when shipping the product(s) to the receiver.

NOT COVERED BY THIS WARRANTY

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